New or less known *Acrididae* from Central Asia

BY

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About three years ago I undertook, on the suggestion of my friend V. I. Plotnikov, Director of the Central-Asian Station for Plant Protection in Tashkent, a general survey of the Acrididae of Central Asia, with a view of publishing a handbook for their identification and study. As a basis of this work served collections sent to me by Mr. Plotnikov, which proved to contain a number of undescribed species, or such as have been only very inadequately described by previous authors. A re-examination of Central-Asian specimens of other species, recorded from the country before, showed that in a number of cases they have been referred to known species incorrectly, being either distinct specifically, or belonging to well distinct geographical races. While the book on the Acrididae of Central Asia, containing keys, descriptions and figures, is hoped to be published in Russian shortly, I thought it imperative that all descriptions of new forms and notes of systematic and synonymic value should be published separately and in a more widely known language and the present paper is one of the series written to this end [1].

A work of this kind could not be accomplished without re-examination of types of old species, and for the generous assistance in this respect I am deeply obliged to Prof. R. Ebner in Vienna, Miss E. Mi-

[1] Others are:

1. «The genus *Hilethera* Uv. and its species.» *Eos*, I, 1925, pp. 33-42.

2. «Notes on the Acrididae of Central Asia, with descriptions of new species and races.» *Journ. Bombay Nat. Hist. Soc.*, XXX, 1925, pp. 260-272.

3. Some new alpine grasshoppers of the genus *Conophyma* Zub. from Central Asia.» *L. c.*, pp. 551-560.

4. «A preliminary key to the Central-Asiatic species of the genus *Imethis* Fieb.» *Konowia*, 1926 (in print).

ram, Mr. B. S. Vinogradov and Mr. S. P. Tarbinsky in Petrograd and Prof. C. Bolívar in Madrid.

The types of new species and races will be deposited in the Zoological Museum of the Academy of Sciences in Petrograd; paratypes will be placed in the collections of the Central-Asian Station for Plant Protection in Tashkent, in the British Museum and Madrid Museum.

Figures of nearly all my new forms, as well as of many other local species will be found in the Russian book mentioned above.

Gelastorhinus sagitta Uv.

I have described this species from Farab, on Amu-Darja (*Horae Soc. Ent. Ross.*, XL, No. 3, 1912, p. 10), and later on identified with it some specimens from Central India (*Ann. Mag. Nat. Hist.*, ser. 9, VII, 1921, p. 482). That my record must be, however, suppressed, as at the time of writing it I had no specimens of the true *G. sagitta* before me and relied on the description and figures. A direct comparison of the Indian specimens recorded by me with specimens of *G. sagitta* recently received by me shows that they differ in the shape of the fastigium of vertex, in pronotum and in general measurements, Indian insects being somewhat smaller. Though the differences are rather minute, I still think it better not to apply the name *sagitta* to the Indian insect, Indian species of this genus being still in absolute confusion.

At the time of describing *G. sagitta* I was unable to compare it with Walkerian species, but an examination of the types of the latter shows that *G. sagitta* may be compared only mith *G. filatus* Walk. (*Mesops filatus* Walk.), but differs from it in somewhat larger size and broader fastigium; unfortunately Walkerian type is a male from alcohol and very much distorted, which makes a comparison unreliable; in the meantime I do not feel justified in ignoring those differences and sinking *sagitta* as a synonym of *filatus*.

Platypterna hebetata sp. n.

♀ *(type)*. Antennae as long as head and pronotum together, not strongly dilated in the basal third, moderately compressed, all edges

being obtusely rounded, not sharp; joints of the dilated part with sparse, but fairly strong punctures, joints of the apical round part very finely and densely punctured; 3rd (*i. e.* the first of the dilated portion) joint semilunar; 4th very short, more than three times as broad as long; 5th about half again as long at the 4th; 6th a little longer and slightly narrower than 5th; 7th about as long as 5th, but narrower than it; 8th nearly as long as 6th and 7th together and about as broad as long; 9th as long as 8th, but distinctly narrower than it and half again as long as it is broad, indistinctly divided into two; 10th and 11th shorter and narrower than 9th, longer than broad; 12th and 13th about as long as 11th, but narrower and scarcely compressed; the remaining joints cylindrical. Face straight in profile, punctured; frontal ridge not constricted at the fastigium, slightly widened between antennae, parallel-sided down to just below the ocellum, gradually and appreciably widening towards the clypeus; its sulcus shallow, obsolescent at the level of antennae; surface with two lateral rows of strong punctures above the ocellum and irregularly punctured below it; margins thick, callous. Lateral facial keels very slightly convex, almost straight. Eyes oblique; their longest diameter less than twice the shortest one; apex not very narrow, rounded. Vertex and occiput uneven, but not rugulose, with a low median carina, gradually obsolescent behind, but reaching the pronotum, and a pair of low and broad callous submedian ridges; fastigium of vertex very broadly parabolic, almost semicircular, distinctly broader than long; its surface convex, with a distinct submarginal sulcus, margins raised; fastigium in profile equal in length to the shortest diameter of one eye; foveolae irregular, elongate, slightly curved, well impressed behind, but gradually obsolescent in front and replaced there by 2-3 large punctures; their margins thick, callous, punctured; subocular sulcus sharp.

Pronotum with the disc obtusely tectiform, with a few scattered shallow punctures; metazona only slightly shorter than prozona, indistinctly callous-rugulose behind; hind angle very obtuse, broadly rounded. Median keel well raised, thick, straight in profile; lateral keels thick, obtuse, callous, gradually divergent behind, practically straight, but deeply cut by the sulci. Lateral lobes distinctly longer than deep, strongly callous-rugulose, and in metazona punctured as well; with an irregular, interrupted thick callous longitudinal ridge below

the middle; front margin moderately oblique, forming an obtuse angle with the lower margin, which is distintly bi-sinuate and in front ascending; hind angle slightly obtuse and broadly rounded; hind margin oblique, practically straight. Sternum smooth, with only a few indistinct punctures near the margins.

Hind femora moderately robust, with a distinct, though broad, filiform part.

General coloration brownish-testaceous. Antennae dark-brown. Face pale-testaceous with numerous brown dots. Margins of fastigium with confluent blackish dots. Head above with the median keel and the callous submedian ridges pale, included between chocolate-brown supra-ocular fasciae; cheeks dirty-stramineous, with an oblique whitish callous line, corresponding to the callous ridge on the pronotal lobes. Pronotum with the keels pale; the disc brown, becoming darker close to the lateral keels; lateral lobes with a deep-brown narrow fascia adjoining the keels and gradually washed out below, with scattered brownish dots elsewhere, and with the submedian callous ridge pale. Elytra hyaline, slightly whitish, basally testaceous; radial veins basally brown, greyish-testaceous in the rest, as are also all other veins, except those in the pre-radial portion which is pale stramineous, with whitish veins and veinlets; some of other transverse veinlets and part of the discoidal false vein are also whitish; discoidal field with a few small brownish spots along the middle. Hind femora whitish-stramineous with brown dots on keels; knees unicolorous. Hind tibiae very faintly bluish; spines brown in the apical halves.

♂ *(paratype).* Antennae longer than head and pronotum together, less compressed and dilated, and with the edges still more obtuse than in the female; 4th and 5th joints equally long, more than half the length of the 3rd (semilunar) joint, scarcely twice as broad as they are long; 6th a little longer and slightly narrower than 5th, about half again as broad as long; 7th distinctly narrower and longer than 6th, subquadrate; 8th a little longer and narrower than 8th, distinctly longer than broad; 9th and 10th distinctly narrower than 8th, 9th shorter than, and 10th as long as, the 8th; 11th subcylindrical; the remaining ones cylindrical. Frontal ridge deeply sulcate, its margins thick, callous. Fastigium of vertex scarcely broader than long. Other characters as in the type.

Total length ♂ 19-20, ♀ 29-32 (*type*, 30); pronotum ♂ 3-3.5, ♀ 5-6 (*type*, 5.5); elytra ♂ 16-17, ♀ 25-27 (*type*, 26); hind femur ♂ 10-10.5, ♀ 15-17 (*type*, 16 mm.).

The type and eight paratypes (4 ♂♂, 4 ♀♀) are from Utch-Adzhi, 10-VI-1923; 1 ♀ paratype from the same locality, 2-VI-1921; 3 ♀♀ paratypes from Farab; 2 ♀♀ paratypes from Bairam-Ali, 13-VI-1921 and 20-V-1922; 1 ♀ paratype from Mola-Kara, 10-VI-1923 (all these localities are in Southern Transcaspia, along the line of the Transcaspian Railway).

All writers (myself included) never recorded from Central Asia any *Platypterna* except *P. tibialis* Fieb., that is all specimens were referred to that species without a comparison with the authentic specimens, and even without an attempt to study the material at hand critically and to see whether it really does not include more than one species.

I have now accumulated material on *Platypterna* from various sources and countries, and it shows clearly, that the actual number of species and subspecies in the genus must be very great, while the characters separating them are often very minute and require careful comparative studies, which cannot be sufficiently reliable if binocular microscope is not used, and exact figures of morphological details are not made.

A comparison of the Transcaspian specimens with the insect from Greece which I take to be typical *Platypterna tibialis* Fieb., shows that the two species are very different. The true *P. tibialis* (which will be fully re-described by me elsewhere) has more dilated antennae, with the edges more sharp; its temporal foveolae are very regular, deep, not obsolescent in front and rather sharply marginated; the most obvious difference is in the coloration of hind legs, which in *P. tibialis* bear a sharp round black spot at the base of the inner knee-lobe, while the tibiae are pale violaceous-grey. Indeed, most of species of *Platypterna* known at present are provided with the black knee-spot of the hind femora, and this character cannot be ignored in systematics of the genus.

A careful comparison of the Transcaspian species with other known ones did not permit me to identify it with any one of them, and I have no hesitation in describing it as new.

The salient characters of *P. hebetata* are the imperfect temporal foveolae and the structure of antennae. The latter is subject to some variations, the compressed part consisting sometimes not of 13 joints, as in the type, but of 10-12 joints; it is also in some cases less dilated and this reflects itself in the relative dimensions and in the shape of separate joints. At the same time, antennae of *P. hebetata* are always remarkable for their «bluntness», their edges, which in some other species are extremely sharp, being in our species thick and obtuse; this appears to be a very reliable character, though it must be, of course, used in connection with other specific features.

In the general coloration *P. hebetata* varies considerably. The type described above represents a form which is most common, at least amongst the series studied, but there are also other colour forms. In very pale stramineous forms there is, usually a broad chocolate-brown lateral fascia, running from the eyes and along the upper half of lateral pronotal lobes and radial veins of elytra; upper margin of the external field of hind femora is usually also with a longitudinal brown fascia. In one specimen there are very striking chalk-white longitudinal fasciae. Three females are pale green, and with the face, vertex and pronotum scarcely punctured, but otherwise not differing from the type.

Platypterna hebetata kazaka, Tarbinsky, sbsp. n.

1910. *Platypterna tibialis,* Uvarov *(nec* Fieb.), Horae Soc. Ent. Ross., XXXIX, p. 363.

I have recorded this insect from the Uralsk province, north of the Caspian Sea, but have pointed out its relatively small dimensions. Recently, I begun to suspect that this is not *tibialis,* and asked Mr. S. P. Tarbinsky to send me its description, with sketches; having received these I became certain that this must be a species related to the Transcaspian *hebetata.* Having myself re-examined a pair, I can state that the insect is really very close to *hebetata,* but differs from it in certain characters which may, perhaps, be only of subspecific value. Here is the description supplied by Mr. Tarbinsky who must be considered the author of the new subspecies:

«♂. Antennae half again as long as the head and pronotum together. Their 1st joint rounded-angulate; 2rd very short; 3rd semilunar, apically half as broad again as basally; 4th short, two and half times as broad as long; 5th nearly half again as long as 4th, a little broader than long; 6th quadrate; 7th twice as broad as long and half the length of the 6th; 8th half again as long as 7th, nearly quadrate; 9th quadrate; 10th and the following ones cylindrical, the 10th being half again as long as the next and more than half again as long as broad. Frontal ridge straight in profile, sulcate; between the antennae widened and practically flat, towards the ocellum somewhat narrowed, further down again widened. Lateral facial keels convex. Vertex and occiput with an obsolescent median keel, which is well distinct only at the fastigium. Fastigium in profile shorter than the shorter diameter of an eye. Foveolae of vertex feebly impressed, five times as long as broad, reaching the ocelli; their upper margin angulate near the base, the lower one bowed. Pronotum with the hind margin rounded; hind sulcus scarcely behind the middle; disc slightly convex, in metazona punctured; lateral keels feeble, straight throughout, divergent backwards; median keel straight, equally raised throughout; lateral lobes with the front margin slightly oblique, forming an obtuse angle with the bi-sinuate lower margin; hind angle about 90°, rounded. Pleurae punctured. Mesosternal lobes as long as broad, with the inner margins broadly rounded. Metasternal lobes separated only at the base. Elytra narrow, projecting beyond the hind knees by a fourth of their length. Subgenital plate pointed, with long hairs at the hind margin.

Coloration greyish-stramineous; behind the eyes, along the lateral pronotal keels and the base of the radial veins runs a narrow dark stripe; anterior field of elytra whitish. Hind tibiae pale-bluish.

♀ *(paratype)*. Antennae broken off. Frontal ridge as broad between antennae as at the ocellum, further down widening, with the margins obsolescent towards the clypeus. Lateral lobes of pronotum distinctly longitudinally rugulose, with the front margin distinctly obtuse. Coloration darker than in the male with dark longitudinal striation.

Total length ♂ 17.5, ♀ 26.6; pronotum ♂ 3.3, ♀ 4.5; elytra ♂ 15.9, ♀ 23.8; hind femur ♂ 9.5, ♀ 13.3 mm.

Sand-hills 60 versts S. W. of Kalmykov, Uralsk province.»

This insect differs from all known species of *Platypterna* by its small size, while being the northernmost representative of the genus. Antennae are rather similar to those in *hebetata*, but longer, with more elongated joints in the apical (cylindrical) portion, and with the basal portion more dilated and compressed, though the edges still remain obtuse.

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There is no doubt at all in my mind that further careful collecting and critical examination of specimens of *Platypterna* from Central Asia will bring to light several more species; thus, I recollect seeing in collections specimens with black spots on the inner knee-lobes, which were certainly not *hebetata* and most probably belonged to a new species. However, no descriptions of new species must be attempted without a careful comparison with those known from other countries. In the meantime, *P. hebetata*, with its northern raze *kazaka*, remains the only species definitely known from Central Asia, while *P. tibialis* Fieb. does not belong to its fauna.

Duroniella kalmyka (Ad.) (Fig. 1).

1906. *Duronia kalmyka,* Adelung, Materialy k poznaniyu fauny i flory Ross. Imp., Otdel zoolog., VII, p. 84.

1912. *Duronia fracta* sbsp. *kalmyka,* Uvarov, Horae Soc. Ent. Ross., XL, num. 3, p. 13 (*partim* !)

Adelung described this species very briefly from a single female taken in the Turgai province, Kirghiz steppes (now Kazakstan) and I, in my paper on the Transcaspian fauna (*l. c.*) failed to see that there are more than one species of this genus in Central Asia, with the result that I considered *kalmyka* to be exceedingly variable in nearly all its characters.

Moreover, though unable to compare my specimens with the typical *fracta*, I ventured to suggest that the two are geographical races of one species, differing only in the degree of infumation of the hind wings.

The material from Central Asia which I have before me now shows

clearly that there are two species in it, which can be easily separated especially by the structure of the antennae, a character the value of which has been appreciated by Krauss [1] in a paper unknown to me until after the publication of my paper *(l. c.)*.

Very good figures of the type, a female, of *kalmyka*, supplied by my friend Mr. B. Vinogradov and notes by Miss E. F. Miram, enabled me to identify one of the two species as *kalmyka*, while another proved to be new.

A re-description of *D. kalmyka* Ad., based on the series of specimens before me now is, as follows:

♂. Small, but rather robustly built.

Antennae somewhat shorter than head and pronotum together, expanded near the base, flattened nearly to the middle, round and not incrassate in the rest; 3rd joint (*i. e.* the first of the expanded portion) rounded-triangular, scarcely longer than at the apex broad; 4th and 5th very strongly transverse, about three times as broad as long; 6th transverse, about twice as broad as long; 7th moderatel y transverse; 8th and 9th practically fused together forming a joint somewhat longer than it is broad; 10th subquadrate; 11th elongate; the rest rounded, all of them scarcely longer than broad. Frontal ridge strongly sulcate, coarsely punctured, gradually and very feebly divergent downwards, scarcely expanded between antennae. Fastigium of vertex strongly prominent, longer than at the base broad, apical angle acute, rounded; surface strongly concave, with a narrowly-parabolic impression; margins well raised, callous, with a few punctures, extended behind between the eyes, but becoming irregular and obsolescent in the occiput; median carinula distinct throughout the head; upper surface of head rugulose. Pronotum relatively short; disc

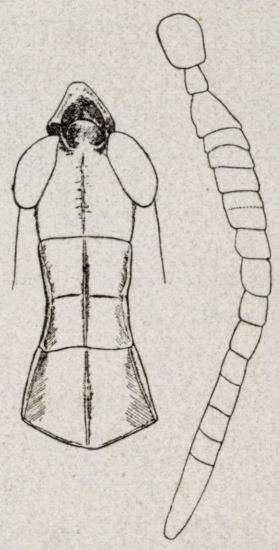

Fig. 1. — Duroniella Kalmyka, Adelung, ♀ type (NB. Antenna is more enlarged than the head).

[1] Verhandl. Naturwis. Vereins Karlsruhe, XXI, 1909, pp. 40-43 (sep. reprint!).

distinctly tectiform, obsoletely rugulose, more distinctly so in metazona; carinae strongly raised, callous; lateral carinae regularly concave in the prozona, more definitely divergent backwards, the narrowest place of the disc being well behind the middle of the prozona; the typical transverse sulcus deep; metazona much shorter than prozona, broadly rounded behind. Lateral lobes of pronotum strongly rugulose, more so in the metazona. Pleurae rugulose. Sternum, specially near its sides, and abdomen below with large punctures. Elytra extending just beyond the abdomen and to the base of hind knees. Subgenital plate short, obtusely conical, coarsely rugulose. Hind femora short and stout. Pulvilli between the tarsal claws very small, scarcely perceptible.

General coloration greyish-brown; sides of pronotum castaneous. Elytra with an ivory-white callous stripe along the scapular field. Wings colourless, veins brownish.

♀. Considerably larger and more robust than the male. Antennae short, reaching only to metazona of pronotum, compressed throughout (though less so in the apical half where the joints are elliptic in section), considerably expanded in the basal half, slightly incrassate beyond the middle towards the apex; all joints short, transverse or not much longer than they are broad. Frontal ridge deeply sulcate, coarsely punctured. Face, cheeks and head above rugulose (rugosity of the head and pronotum not shown in the figure of the type). Fastigium of vertex slightly longer than broad; its apex parabolic; surface with a distinct bow-shaped sulcus. Pronotum distinctly rugulose; median keel well raised, in profile somewhat convex. Elytra just reaching the hind knees (or, as in the type, extending a little beyon them).

Coloration brownish-grey above, apple green on the sides, elytra with a sharp white line in the scapular field.

Total length ♂ 15-16, ♀ 22-26; pronotum ♂ 3.5-4, ♀ 5-6; elytra ♂ 9-11, ♀ 15-16; hind femur ♂ 10-11, ♀ 13-14.

All previous records of distribution of this species must be cancelled, as they partly apply to the other species. In the series before me now, *D. kalmyka* is represented from the following localities:

Merv, Askhabad and Bairam Ali in Transcapia; Tashkent and district; Dzhizak; Min-Bulak in Fergana; Blagovestchenskoe, distr. Pishpek; Perovsk.

D. kalmyka differs strongly from *D. fracta* Kr. (of which I studied co-types), from Ephesus, by its considerably smaller size, not at all, or scarcely infumate hind wings, but particularly by its short antennae; the latter are nearly as short as in *D. laticornis* Kr., from Palestine, but more dilated basally and narrow in the apical part.

Duroniella gracilis, sp. n.

1912. *Duroniella fracta* sbsp. *kalmyka,* Uvarov, Horae Soc. Ent. Ross. XL, num. 3, pp. 13-16 *(partim !).*

♂ *(type).* Of middle size, slender.

Antennae somewhat longer than head and pronotum together, scarcely expanded at the base, flattened in less than their basal third, round and slender in the rest; 3rd joint *(i. e.* the first of the expanded portion) elongate-trapezoidal, distinctly longer than at the apex broad; 4th and 5th transverse; 6th subquadrate; 7th quadrate; the rest elongate, most of them much longer than broad. Frontal ridge sulcate throughout, not punctured, slightly expanded between antennae. Fastigium of vertex moderately prominent, scarcely longer than at the base broad; apical angle broad, rounded; surface feebly concave, with a feeble bow-shaped impression; margins little raised, smooth, not extended behind; median carinula scarcely perceptible in the occiput; upper surface of head practically smooth.

Pronotum relatively long; disc practically flat, somewhat punctured in metazona, but not rugulose; carinae little raised, obsolescent behind; lateral carinae in prozona almost straight; in metazona divergent; the typical transverse sulcus not deep; metazona distinctly shorter than prozona, rounded behind. Pleurae indistinctly punctured. Sternum with a few scattered punctures. Elytra extending well beyond the hind knees. Hind femora relatively slender. Tarsal pulvilli very small.

General coloration brownish-grey; pronotum and pleurae ashy-grey. Elytra unicolorous, only with a few brownish spots along the middle. Wings colourless; veins brownish.

♀ *(paratype).* Not very much larger than the male. Antennae shorter, more distinctly expanded in the basal portion (but still narrower here than the frontal ridge), round and not incrassate in

the apical half, where the joints are somewhat longer than broad. Frontal ridge feebly sulcate, finely punctured. Face, cheeks and head above smooth. Fastigium of vertex shorter than broad, with broadly rounded apex; surface practically convex; the bow-shaped sulcus feeble. Pronotum slightly rugulose in metazona only; median keel low, in profile straight. Elytra extending well beyond the hind knees.

Coloration very pale-buff above, pale apple-green on the sides; elytra with a whitish line in the scapular field and brown radial veins.

Total length ♂ 17.5-22; ♀ 25-28; pronotum ♂ 3.5-4, ♀ 5-6; elytra ♂ 15.5-17; ♀ 19-21; hind femur ♂ 11-12, ♀ 14-15 mm.

Golodnaya step: Nadezhdinsky poselok, 3 ♂♂ (including the *type*), 2 ♀♀. Transcaspia: distr. Merv, 3 ♂♂, 1 ♀. Askhabad, 1 ♀; Artchman, 1 ♀; Karshi, 1 ♀. Semiretchye: Ak-togoi, 1 ♂; valley of the river Ili, 1 ♀; Kugolodtar, 1 ♀; Verny district, 1 ♀.

The coloration in this species varies just as much as in others; pale-green form is known to me in the female sex only, while grey and brown forms occur in both sexes; for a more detailed description of types of coloration see my notes on the Transcaspian *Duroniella* (*l. c.*) which apply equally well to both species.

D. gracilis seems to be related to the Saharan *D. lucasi* Bol., differing from it mainly in the larger size, more slender habitus and more elongated and less compressed basally antennae in the male. It is not impossible that *gracilis* should be considered only a subspecies of *lucasi*, but I prefer to have this problem open until a proper revision of this difficult genus.

The differences between the two Central-Asian species are clear when their descriptions are compared; the males are best separated by the structure of antennae, while in females the shape and sculpture of vertex provide also very reliable characters for identification.

Omocestus tarbinskii, sp. n.

Closely allied to *O. ventralis* (Zett.), distinctly larger and more robust.

♂ *(type)*. Antennae distinctly longer than head and pronotum together.

Head thick. Frontal ridge practically straight in profile, thick, gradually and feebly widening downwards, convex, punctured, below the ocellum shallowly sulcate, the margins of the sulcus being thick, convex. Vertex well projecting in front of the eyes; its surface very feebly impressed; margins slightly incurved, forming an acute, not at all rounded, apical angle; foveolae long, not deeply impressed, but with well defined, smooth margins. Eyes broadly oval.

Pronotum with the sides convex. Lateral keels as in *O. ventralis*. Typical sulcus about the middle. Hind margin obtusely angulate, with the apex rounded. Lateral lobes rugulose.

Elytra reaching a little beyond the hind knees; venation as in *O. ventralis*, but the interradial field a little broader. Hind femora thick.

General coloration greyish-ochraceous. Head and pronotum dotted with brown, with a broad pale ochraceous median stripe; cheeks brownish. Palpi pale dirty yellowish. Lateral pronotal keels bordered with blackish. Elytra semi-transparent, pale greyish-ochraceous, without definite spots; veins of the anterior half brownish, those of the posterior pale greyish-ochraceous. Wings slightly infumate apically. Abdomen black basally, red in the apical half. Hind femora red below; knees black. Hind tibiae red, black at the very base and blackish apically.

♀ *(paratype)*. Very robust. Fastigium of vertex rectangular, with the angle not rounded. Elytra reaching the hind knees. General coloration pale buff; face with brown-blackish markings; pronotal keels pale, sharply bordered by black; elytra with a brownish stripe along the discoidal area and a few brownish spots in the apical half; abdomen red below only.

Total length ♂ 18, ♀ 26; pronotum ♂ 4, ♀ 5.5; elytra ♂ 15, ♀ 17; hind femur ♂ 11.5, ♀ 15 mm.

The type and one female paratype are from the Perovsk (now Kyzyl-Orda) district on Syr-Darya (taken by S. P. Tarbinsky); other paratypes are from: Iskander, Daulskaya volost, Samarkand province, 2 ♂♂; Dagbid, Samarkand district, 1 ♀; Kokpaktos, Tchuisky district, 1 ♀.

Two males from Iskander are slightly smaller than the type, but

robustely built. The female from Dagbid is of a uniform brownish-grey coloration, without any markings.

This stately species has been sent to me in the first instance by Mr. S. P. Tarbinsky who collected it himself and recognised it as a new species, or a new subspecies of *O. ventralis*, which opinion he based partly also on a study of the male genitalia. I am inclined to regard it as specifically distinct from *O. ventralis* by its much more robust general habitus and, especially, by the fastigium of vertex being quite acute apically, instead of rounded as in *O. ventralis*. Records of the latter species from Central Asia refer, probably, to *O. tarbinskii*, and the true *O. ventralis* is known only from the northernmost parts of the country (Kirghiz steppes), though its occurence in the mountains of Turkestan is not impossible.

It is with a great pleasure that I dedicate this new species to Mr. S. P. Tarbinsky, who discovered and recognised it and, though himself an ardent orthopterist, kindly permitted me to describe it.

Genus **Chorthippus** Fieb.

With the strong increase in the number of species of *Chorthippus* Fieb. and *Stauroderus* I. Bol., it is becoming more and more obvious that the only difference between them, the shape of lateral pronotal keels, cannot be possibly considered of generic value. Tarbinsky recently (*Revue Russe d'Entom.*, XIX, 1926, p. 190) attempted to improve the situation by restricting *Chorthippus* Fieb. to *albomarginatus* Deg. and *dorsatus* Zett., and removing other species to *Stauroderus* Bol. but still no clear line separating the two genera can be drawn and I regard it as absolutely unscientific to keep them apart; for the sake of convenience only they may be preserved as subgeneric divisions of one genus which must be called *Chorthippus* Fieb.

Chorthippus (Stauroderus) hemipterus sp. n.

Similar in size and the habitus to *Ch. macrocerus* F. W.

♂ *(type)*. (Antennae broken off in the type; in a paratype

they are also incomplete, but longer than head and pronotum together).

Face strongly oblique. Frontal ridge practically parallel-sided, shallowly sulcate from the antennae downwards, more deeply so and with the margins raised in the lower half. Fastigium of vertex practically rectangular in front, with the immediate angle rounded. Foveolae distinctly curved.

Lateral pronotal keels rounded inflexed behind the middle of prozona, divergent both forwards and backwards. Typical sulcus about the middle. Hind angle very obtuse, rounded.

Lateral lobes strongly sinuate below, with the hind angle broadly rounded.

Elytra extending to the anal plate and not reaching the hind knees by a considerable distance, of the same general shape as in *Ch. macrocerus*, but with the apex more broadly parabolic. Mediastinal field extending to about the middle of the anterior margin, little expanded basally. Scapular field reaching nearly to the apex of the elytron, well expanded, with sparse regular veinlets. Interradial field slightly expanded, with very sparse veinlets; second radial vein reaching the anterior margin very close to the apex of elytron; third radial slightly curved, branched, its anterior branch forming with its stem an obtuse angle and ending at the apex of the elytron. Discoidal field moderately broad, closed, extending not far beyond the middle of the elytron, with sparse, fairly regular veinlets. The ulnar veins distinctly divergent, the anterior one angular-reflexed in its apical part. Wings a little shorter than elytra.

Subgenital plate very short and obtuse.

Body and legs hairy.

General coloration pale brownish-ochraceous. Pronotal lateral keels marginated with blackish-brown. Elytra transparent; veins ochraceous or brownish. Hind femora with only a very faint suggestion of darkish fasciae; their inner side with an oblique blackish basal streak; lower surface yellow; knees not dark. Hind tibiae pale red. Apex of the abdomen pale brick-red.

♀ (*paratype*). Antennae a little longer than head and pronotum together. Frontal ridge convex, under ocellum shallowly sulcate.

Elytra reaching beyond the middle of abdomen and about the

middle of hind femora; venation similar to that in *Ch. macrocerus* but the third radial and first ulnar are not straight, and the discoidal field is closed, or nearly so; interlunar field somewhat broader, with a short false vein (not always present).

Valvae of ovipositor short, with short, strongly curved black apices; the lower ones with strong lateral teeth.

General coloration more variegated than in the male, with the usual blackish and pale pattern of the head and pronotum; elytra with a whitish callous stripe in the scapular area and pale stripes along the anal veins; middle portion of elytra darker. Hind femora with blackish pattern as in *Ch. macrocerus*. Hind tibiae testaceous, with brownish dots.

Total length ♂ (the second figure in each case applies to the type) 14-15, ♀ 18.5-21; pronotum ♂ 3.5-4, ♀ 4-5; elytra ♂ 8.5-9, ♀ 9-10; hind femur ♂ 9.5-10, ♀ 11-12 mm.

Described from 2 ♂♂ (including the *type*) and 7 ♀♀ from Khumsan, 9-20-VIII-1920; 1 ♀ from Tchimgan, 26-VII-1911; 1 ♂ from Ak-Tash, 23-VII-1920 (all these localities are in the mountains near Tashkent).

The species varies a great deal in its color and pattern, like other species of *Chorthippus*.

Ch. hemipterus may be easily mistaken for *Ch. macrocerus* F. W. (= *cognatus* Fieb.), but it differs in the male sex by the elytra, which are slightly shorter (this being at the cost of their apical part) and with the discoidal field closed, third radial and first ulnar veins not straight, the latter divergent from the second ulnar. The females of the two species are still more similar and the differences in the venation of elytra are not always very obvious, but the short-hooked black-tipped and laterally dentate valvae of ovipositor in *Ch. hemipterus* are entirely different from the unicolorous, slender and unarmed valvae in *Ch. macrocerus*.

From *Ch. (St.) jacobsoni* Ikon. the new species differs by distinctly longer elytra, by the coloration of hind legs and by the structure of ovipositor.

Chorthippus (Stauroderus) jacobsoni (Ik.)

1911. *Stauroderus jacobsoni*, Ikonnikov, Revue Russe d'Entom, XI, p. 350.

Close to *pullus* (Phil.), but differing from all species of the genus by the elytra strongly abbreviated even in the male sex.

♂. Antennae half again as long as head and pronotum together. Head rather thick. Face not strongly oblique. Frontal ridge in profile forming a broadly rounded obtuse angle with the fastigium, slightly expanded between antennae, sulcate and gradually widening downwards. Eyes broadly oval. Fastigium of vertex shorter than long; apical angle right, briefly rounded. Foveolae large, parallel-sided.

Pronotum relatively long, in profile slightly gibbose, the disc being convex in both directions. Lateral keels callous, strongly rounded-inflexed about the middle of the prozona, divergent both forwards and backwards. Median keel linear, sharp. Typical sulcus behind the middle. Hind angle rounded-obtuse.

Elytra extending just beyond the fourth abdominal segment and not reaching the middle of hind femora, elongate-oval, with the apex parabolic. Mediastinal field extending well beyond the middle of the anterior margin, expanded and provided with a false vein near the basis. Scapular field expanded, with the veinlets fairly regular, oblique, obsolescent in the basal part of the field. Interradial field moderately expanded; first and second radial veins incrassate, practically straight, third radial fine, diverging from the second shortly behind the base, practically straight and forming the longitudinal axis of the elytron. First ulnar vein incrassate basally, practically straight and parallel to the third radial, gradually divergent from the second ulnar. Discoidal field parallel-sided, irregularly, or not at all, closed (different on the two elytra), in its apical portion of the same width as the interradial and the interulnar fields and equally sparsely reticulate. Axillary vein strong, regular, joining the anal. Wings rudimentary.

Cerci rather large, compressed, narrowly-triangular, with the apex obtuse.

General coloration olivaceous-brown, reddish in parts. Antennae blackish-brown. Lateral pronotal keels a little paler than the

background. Elytra brownish, transparent. Hind femora pale reddish-brown, with very indefinite dark markings on the outside, with an oblique longitudinal blackish stripe at the base of the inner side, yellow on the underside; knees black. Hind tibiae red, with the condylus black. Abdomen red above and at the apex below, sides of the basal segments blackish.

♀. Antennae a little longer than head and pronotum together. Frontal ridge below the ocellum shallowly sulcate. Fastigium of vertex very obtusely angulate, transverse, feebly convex. Pronotum distinctly gibbose. Elytra covering three tergites; principal veins practically straight, but the hind radial irregular (sometimes interrupted). Valvae of the ovipositor withouth teeth.

Head marmorated with greenish-grey and black, darker above, with a pale median line. Pronotal lateral keels pale, bordered with dark-brown. Elytra dark-brown, with paler stripes along the anal vein. Hind knees brown. Abdomen yellowish, marmorated and spotted with dark brown and black; beneath yellow, turning reddish apically.

Total length ♂ 16, ♀ 19-22; pronotum ♂ 4, ♀ 4-5; elytra ♂ 6, ♀ 5.5-6.5; hind femur ♂ 10, ♀ 11-12 mm.

Described from 3 ♂♂ and 8 ♀♀ from the vilayet of Harms (Garms), Eastern Buchara; also 5 ♀♀ from Southern Buchara.

This is a very easily recognisable species, especially in the male sex, with its unusually abbreviated elytra, bright red abdomen and hind tibiae; and peculiarly gibbulose pronotum with the lateral keel rounded-inflexed. Females are lees striking and may be confused with females of other short winged species. They differ, however, from *Chorthippus parallelus* Zett., from *Ch. turanicus* Tarb. and *Ch. macrocerus* F. W. by the elytra broadly parabolic at the apex, and by the red hind tibiae; from *Ch. hemipterus* (see above) they differ by the same characters, as well as by much shorter elytra and by the unarmed lower valvae of the ovipositor (this latter characters separates the new species also from *Ch. parallelus)*. There seems to be some close resemblance between *Ch. jacobsoni* and *Ch. ingenitzkyi* Zub. and I am unable to state what the differences between the females of two species are, because I have no specimens of the second species before me, but the males clearly differ by the length of elytra.

Female paratypes from Southern Buchara are somewhat larger than those from the Eastern Buchara, but otherwise very similar to them; one of the females is brownish-green and very similar superficially to a *Chorthippus parallelus* with rather more than usually inflexed pronotal keels, but the ovipositor is quite distinct.

Ch. jacobsoni has been found in Eastern Buchara doing damage to wheat fields, together with *Ch. apricarius* Fieb.

Chorthippus (in sp.) **callosus** sp. n.

Resembling superficially *Euchorthippus pulvinatus* F. W. with strongly abbreviated elytra, but scarcely related to it.

♂ *(type)*. Antennae nearly twice as long as head and pronotum together.

Head relatively large. Face strongly oblique. Frontal ridge in profile straight, rounded only just under fastigium, shallowly sulcate and parallel-sided throughout, only slightly narrowed at the fastigium. Fastigium of vertex little projecting forward, transverse, rectangular in front; side margins straight, disappearing behind the lateral angles almost immediately (not convergent towards the median line and extended parallel to it as in *pulvinatus)*. Eyes very broadly oval; their upper angle rounded.

Pronotum gibbulose. Median keel linear, sharp, in profile slightly convex. Lateral keels low, but thick and callous, practically parallel and very gently incurved in the prozona, a little more distant and slightly divergent in metazona, obsolescent near the hind margin. Typical sulcus well behind the middle. Hind margin very broadly obtusangulate, nearly truncate. Lateral lobes convex, between the sulci gibbulose, decidedly longer than high. Prosternum with a very low conical tubercle. Pleurae with a few feeble punctures.

Elytra oval, short, covering only five basal tergites; their widest place is at the apical fourth; apex widely rounded; anterior margin nearly straight, while the posterior is distinctly curved. Mediastinal field extending to the apical third, very little expanded in the middle. Scapular field strongly expanded, especially near the apex, with sparse, regular veinlets. First radial vein feeble; second radial thick,

straight except apically where it is gently curved backwards, ending in the exact apex of the elytron; third radial feeble, practically straight, gradually and not much divergent from the second. Discoidal field practically parallel-sided, perfectly open, with broad subquadrate celles. Second ulnar feeble, narrowly separated from the anal and confluent with it not far from the apex. Anal and axillary veins thick, subparallel, not joined. Wings rudimentary.

Hind femora relatively short and thick. Pulvilli of the tarsi small, narrow, shorter than half of a claw.

Anal plate rounded-rhomboidal, not longer than broad. Subgenital plate oval, very short.

General coloration pale brown, stramineous in some parts. Head greyish-brown above, with a pale median line. Disc of pronotum greyish brown; median keel darker, lateral ones paler; lateral lobes shiny; their upper half dark sepia, reddish in metazona; lower half very pale sepia, separated from the upper half by a thick, ivory-yellow callous fascia. Elytra with the veins brownish, with an ivory-yellow non-transparent streak in the scapular field. Hind femora stramineous, above brownish. Hind tibiae stramineous.

♀ *(paratype)*. Antennae somewhat longer than head and pronotum together. Fastigium of vertex obtusely rounded. Elytra reaching the middle of the second tergite, widely separated on the back, oval, widest behind the middle, with the apex elliptic; their veins straight. Lower valvae of the ovipositor very short and broad, with broad rounded projections, but no teeth.

Total length ♂, 14-15 (second figure refers to the *type*); ♀, 20; pronotum ♂, 3-3.5; ♀, 4; elytra ♂, 5-6; ♀, 4; hind femur ♂, 8-9.5; ♀, 11.

One male *(type)* from Aulie-Ata, 1.VI.1919; another male (paratype) from the valley of the river Tchu, Aulie-Ata district, 30.VI.1919; one male and one female from Muyun-Kum, 23.V.1910 (A. Hohlbeck coll.)

The male paratype differs from the type by the lateral pronotal keels a little more incurved, and by the more contrasting coloration, especially on the lateral pronotal lobes, the upper part of which is chocolate brown and the ivory-white callous ridge stands out very sharply. Paratypes from Muyun-Kum are smaller, but otherwise typical.

Genus **Euchorthippus** Tarb.

S. P. Tarbinskij recently (*Revue Russe d'Entom.*, XIX, 1926, p. 192) has quite correctly removed *Ch. pulvinatus* F. W. to a genus of its own which he called *Euchorthippus*, but his diagnosis of the new genus includes certain characteres of specific value, while others, and much more important ones, are omitted. This vagueness of the diagnosis is, probably, due partly to the fact that he included in *Euchorthippus*, apart from the genotype, also his own species *Ch. kozhevnikovi* which is clearly not congeneric with *pulvinatus*.

Other species which find their natural place in *Euchorthippus* are *albolineatus* Luc., *declivus* Bris. and, apparently, *unicolor* Ikonn. (not known to me from specimens). A brief diagnosis of the genus applicable to all its species and clearly separating it from *Chorthippus* Fieb. may be given, as follows:

Vertex with its lateral margins prolonged behind into irregular (sometimes feeble, but at least partly distinct) carinulae, converging towards the middle and running backwards parallel to the median line, which is also at least slightly raised (in *Chorthippus* there is never any trace either of the raised median line, nor of the prolongations of the margins of vertex). Eyes oblique, elongate, with the upper angle acute. Sternum clothed with dense hairs, especially in the male and strongly punctured. Mesosternal interspace in the male constricted in the middle. Pleurae punctured.

Dociostaurus albicornis (Ev.).

Appears to be the commonest and most widely distributed species of *Dociostaurus* in Central Asia. Specimens from various localities, however, look very different, while preserving the general characters of the species as defined by me some years ago (*Bull. Entom. Research*, XI, p. 400, 1921). That my re-description of *D. albicornis* has been found by Miss E. Miram to agree with the actual types, now in the Zoological Museum, Petrograd, but I find now that the structure of the frontal ridge has been described by me not quite correctly.

In fact, this is not a reliable character to separate *albicornis* from *anatolicus*, while the two species are very easily separated by the shape of their temporal foveolae and by the coloration of hind tibiae which in *anatolicus* are always with the very base (condylus) black. The typical formof *albicornis* is also much smaller than *anatolicus*, its hind wings are not rose and the elytra somewhat shorter than the abdomen; a new subspecies of *albicornis* (see below) is more similar to *anatolicus*, but still distinct in the temporal foveolae and the hind tibiae.

D. albicornis is also amply different from *D. genei* Ocsk., in which the temporal foveolae are very short and broad and practically vertical, while the occiput is without the median carina, always present in *D. albicornis* and *D. anatolicus*.

Another pale-legged member of the genus is *D. crucigerus tartarus* Stschelk., but it again differs from *albicornis* by the non-carinate occiput, small, narrow and obtusely marginate foveolae, and by the black base of hind tibiae.

The typical locality for *D. albicornis* is in the steppes of the Saratov province and the same small, rather obsoletely marked form occurs all over Kirghiz steppes and down to Semiretchye province. Farther south, in the plains of Russian Turkestan a slightly larger form occurs, but its differences from the typical one are not sufficiently pronounced to be of taxonomic value. In the mountains of Turkestan appears another form, as small as the typical one, but of darker general colour while the pale pattern is more pronounced, the hind tibiae are tending to become pale-sanguineous (Yaskak-Ssu), and there is sometimes a pinkish tinge at the base of hind wings. This last form may prove to be worthy of recognition as a subspecies, but I abstain from doing so until more material is studied.

A very distinct form of *D. albicornis* is found in Transcaspia (Turcmenistan) which I admit as a new subspecies, as follows:

Dociostaurus albicornis turcmenus sbsp. n.

Very similar in size and the general appearance to *D. anatolicus* Kr., but differing in the usual specific characters. General coloration pale straw-yellow, with the black pattern narrow, but very sharp. Hind

wings often rose. Elytra of the male reaching the hind knees, in the ♀ slightly shorter. Total length ♂ 18, ♀ 30; pronotum ♂ 3.5, ♀ 5.5; elytra ♂ 14, ♀ 21; hind femur ♂ 14, ♀ 20 mm.

Described from 2 ♂♂ and 2 ♀♀ (including the *type*) from Tedzhen; 1 ♀, Bairam-Ali; 1 ♂, 1 ♀, Sary-Jazy and 1 ♂, 1 ♀ from Kassan in Bukhara.

This subspecies has been evidently mistaken by previous authors (myself included) for *D. anatolicus*, which does not occur in Central Asia at all. It seems that *D. genei* Ocsk. must be also excluded from the Centralasian fauna, as I have not found a single specimen of it amongst the large collection at my disposal; previous records of *D. genei* from Central Asia must refer either to *D. albicornis*, or to *D. crucigerus tartarus*.

Dociostaurus plotnikovi Uv. f. **macroptera** n.

Amongst a series of typical specimens of *D. plotnikovi* collected at Tedzhen there were three females with the elytra and wings fully developed and reaching the hind knees; this is clearly only a macropterous form of the same species. It is remarkable that the shape of pronotum in this form does not differ from that in the typical one, its metazona being just as short and truncate behind.

Genus **Eremippus** nov.

Antennae relatively stout, basally somewhat compressed and in the female slightly dilated.

Head distinctly ascending, especially in the male. Face very oblique, more so in the male. Frontal ridge in profile quite straight, forming an acute angle with the fastigium of vertex, in both sexes deeply sulcate throughout; its margins sharp, straight, converging to a point at the fastigium and gradually diverging downwards, reaching the clypeus. Fastigium of vertex horizontal, or slightly sloping, concave; margins raised, sharp, forming an acute apical angle, not extended between the eyes. Temporal fovelae placed very obliquely, almost vertically and therefore only partly visible from above, deeply

impressed, about twice as long as broad, narrowed anteriorly. Eyes large, strongly prominent, particularly in the male.

Pronotum compressed laterally, scarcely constricted in the middle, slightly convex above. Median keel sharp, linear; lateral keels sharp throughout, subparallel anteriorly, broadly inflexed in the middle, divergent backwards, deeply interrupted by the typical sulcus and somewhat displaced outwards behind it. Only the typical sulcus developed and it is placed well behind the middle of the pronotum. Lateral lobes slightly longer than deep.

Prosternum distinctly, though obtusely, angulate-convex anteriorly. Mesosternal lobes and their interspace decidedly transverse, all about the same width. Metasternal lobes well separated in both sexes.

Elytra and wings well developed. Mediastinal field of elytra expanded near the base, reaching to, or extending beyond, the middle of the anterior margin. Scapular field expanded in the apical half, especially in the male. Discoidal field with an irregular, but always distinct, false vein. Interulnar area narrow, in the female often with a false vein. Wings narrow.

Abdomen with the tympanum not quite closed. Valvae of the ovipositor short, stout.

Genotype: *Stenobothrus simplex* Ev.

The resemblance of this new genus to *Stauroderus* Bol., to which the genotype of *Eremippus* was always referred, is only superficial, the two genera not even being closely related to each other. Their main difference consists in the structure of the head, most particularly in the position of temporal foveolae, which in the new genus are on the almost vertical plane, forming with the upper surface of the fastigium an angle not much exceeding 90°; this arrangement of the foveolae makes them only partly visible from above, while in *Stauroderus* and allied genera the foveolae are visible from above at their entire width, because they form with the fastigium a very obtuse angle. Such a position of foveolae is observed in the genus *Stenohippus*, recently described by me to include several species from subtropical African savannas and from Northern India, but the shape of foveolae in that genus is different, while other important characters separating the two genera exist in the structure of front and of pronotum.

Frontal ridge in the new genus is also not of the type common in *Stauroderus*, being deeply sulcate throughout in both sexes, with the margins gradually divergent from a point at the fastigium downwards, and in profile it forms an acute angle with the fastigium, while in *Stauroderus* the angle is always broadly rounded.

Pronotum is more elongated than in *Stauroderus*, apparently at the expense of its anterior portion, the typical sulcus being shifted well behind the middle of the pronotum. The shape of pronotal keels in the new genus is also peculiar, though this character cannot be regarded as very important. Much more significant is the structure of prosternum, where a low, depressed tubercle is present, similar to that in *Arcyptera*, though less definitely expressed.

Another character of *Eremippus* which I think is very important and alienating it from all *Stenobothrini* is the presence of a distinct, if not always complete, false vein in the discoidal field. There is also a tendency to the development of a false vein in the interulnar field, particularly in the females. The venation of elytra, on the whole, is exactly as in the group of *Phlaeobae*, but the temporal foveolae are entirely different from those in any genus of *Phlaeobae*.

A certain resemblance (perhaps even a true relationship) existes between *Eremippus* and *Duroniella* Bol., but of course the latter can be at once recognised by the complete absence of temporal foveolae.

In the type of the new genus there is another very striking feature — almost complete absence of the pulvilli between tarsal claws, but in the second species, which I find necessary to refer here, the pulvilli are fairly well developed. I do not attach much importance to this character, which is clearly associated with the habitat, pulvilli being reduced, or absent, in species living on the ground, while in those climbing vegetation they are always strongly developed.

Aiolopus affinis (Bol.).

Amu-Darya: Kerki, 8, VII, 1924, 1 ♂, 1 ♀.

I have recently redescribed and figured this insect from extensive material from Egypt, Mesopotamia, Palestine, Somaliland, Arabia and India (*Bull. Min. Agr. Egypt*, No. 41, 1924, p. 21, pl. II, figs. 25, 26,

27), but this is the first record for Central Asia, the two specimens before me being quite typical.

The broad hind femora of this species clearly indicate its relationship with *A. strepens*, but in the general habitus it is more like *A. thalassinus*, from which it differs strongly by its heavily spotted elytra, apart from the shape of hind femora and other morphological characters.

I think now that it is more correct to regar *A. affinis*, as specifically distinct from *A. strepens*.

Aiolopus crassus Karny.

1907. *Aiolopus tergestinus* var. *crassus* Karny, Verh. Zool.-bot. Ges. Wien, LVII, p. 286.

Karny regarded this insect as a mere variety of *A. tergestinus*, but an examination of a specimen from the typical locality (Sarepta) in Dr. Burr's collection (now property of the Oxford University) showed me at once that it has nothing to do with *A. tergestinus*. Indeed, Karny himself pointed out that *crassus* differs from other forms of *A. tergestinus* by the position of the discoidal vein which is nearer to the radial, than to the ulnar vein; this indicates that *crassus* belongs to *A. thalassinus* group of species. Moreover, the temporal foveolae in *crassus* are decidedly truncate at the apex, that is, trapezoidal, not triangular as they are in *A. tergestinus*, while its hind femora are nearly as broad and short, as in *A. strepens*, not long and slender as in *A. tergestinus*.

A careful study of the specimen, a male, before me enables me to place *crassus* in the same group as *A. burri* Uv. (*Ent. Record*, XXXIII, 1921, p. 155) from Macedonia, and *A. platypygius* Pant. from Spain; it is not impossible that all three insects may prove to be geographical races of one species, but I think it more advisable to keep them apart, until the group is better known.

A brief diagnosis of *A. crassus* must be given, Karny's description being much too short and indefinite.

♂. Small, very similar in general apperance to a *Dociostaurus*. Head thick and large. Frontal ridge broad, convex, quite obliterate below the ocellum. Foveolae of vertex elongate-trapezoidal, practically flat and made perceptible mainly by being strongly punctured.

Fastigium of vertex practically flat, about as broad as long, truncate apically. Pronotum broad and short, subselliform; its metazona distinctly broader than long. Elytra broad and short, reaching just beyond the hind knees; mediastinal and scapular areas dilated, with incomplete false veins; discoidal vein as in *A. thalassinus*. Hind femora short and broad; hind tibiae short and thick. Subgenital plate distinctly flattened out, longer than broad, with the apex parabolic; cerci reaching almost to its apex. Coloration pale greyish-ochraceous; pronotum above with an indistinct pale X-shaped design; elytra with a feebly callous whitish stripe in the scapular area and a few scattered blackish angular spots; hind femora externally with indistinct dark fasciae; their inner face pale with three sharp black fasciae; lower surface reddish; knees black; hind tibiae whitish, with the base and a premedian fascia below black; their apices below brown.

Total length ♂ 17; pronotum 3.5; elytra 13; hind femur 9.5 mm.

A. crassus is nearest to *A. burri*, differing from it in smaller rize, scarcely impressed temporal foveolae and, especially, in the subgenital plate being distinctly flattened out, while in *A. burri* it is practically round in section. In this latter character *A. crassus* approaches *A. platypygius*, but in the last named species the plate is still more flattened out and its apex is elliptical, not parabolic; besides, the cerci in *A. crassus* reach nearly to the apex of the plate, while in *A. platypygius* they are distinctly shorter. In the coloration, there is no appreciable difference between *A. crassus* and *A. burri*, but in *A. platypygius* the elytral spots are large, in fact very similar to what is the usual pattern in *A. thalassinus*.

As for distribution of *A. crassus*, Sarepta remains the only locality where it is known to occur, but it is probably more widely distributed, at least, in the Caspian semi-deserts. There is scarcely any doubt that it is present in some collections, either under the name of *A. tergestinus*, or of *A. thalassinus*.

Aiolopus oxianus sp. n.

♂ *(type)*. Size and the general facies of the typical form of *A. tergestinus* Charp., but closely allied to *A. thalassinus* F.

Antennae half as long again as the head and pronotum together,

their middle joints three times as long as broad. Face strongly reclinate; frontal ridge broad, practically parallel except at the fastigium where it is distinctly narrowed; its surface punctured, slightly impressed below the ocellum, convex near the fastigium. Fastigium of vertex somewhat sloping, elongate-triangular with the very apex truncate. Foveolae very long, strongly narrowed forward, with the apex rounded and the lower margin distinctly incurved.

Pronotum relatively shorter and more distinctly selliform than in *A. thalassinus*, otherwise similar to it.

Elytra long, extending beyond the middle of hind tibiae. Discoidal vein well developed, slightly sinuate, apically strongly approximate to the radial vein.

Hind femora narrow, as in *A. thalassinus*. Pulvilli between tarsal claws very small, scarcely perceptible (as in *A. tergestinus* Charp.).

Subgenital plate as in *A. thalassinus*, short and round.

General coloration pale grey, with a slight ochreous tinge. Antennae with irregular alternating paler and darker rings. Elytra with the membrane hyaline, some of veins ochraceous, some whitish, a few pale brown spots in the basal half, a large brown spot about the middle and a smaller one in the apical third. Wings hyaline, with a very faint yellowish tinge near the base. Hind femora with the inside whitish (only the lower inner carina being reddish) with two fasciae and the knees black; outer face with indefinite grey oblique fasciae and a series of blackish dots along the lower carina; upper surface with two fasciae and a basal spot black. Hind tibiae whitish, getting gradually reddish in the apical third; base and a streak just before the middle below are black. Tarsi whitish.

♀ (*paratype*). Antennae distinctly longer than head and pronotum. Elytra with spots practically obsolete. Lower valvae of the ovipositor with a broad, rectangular tooth.

Total length ♂ (*type*) 24, ♀ (*paratype*) 31; pronotum ♂ 4.5, ♀ 5.5; elytra ♂ 23, ♀ 29; hind femur ♂ 13, ♀ 17 mm.

Kerki on the river Amu-Darya (ancient Oxus), VII.1912, 5 ♂♂ (including the *type*) and 3 ♀♀; Tchardzhui, on the same river, 15.VIII. 1924, 1 ♂, 2 ♀♀; Nadezhdinsky, prov. of Syr-Darya, 10.VI.1912, 2 ♀♀; river Zaravshan, prov. Samarkand, 6.VII.1921, 1 ♀.

This stately new species has a striking superficial resemblance to

the Centralasian (and certain S. European) specimens of *A. tergestinus*, with which it has in common the strongly elongated antennae and the rudimentary apical pulvilli of the tarsi, but, of course, is very easily separated from it by the shape of the foveolae, by the position of the discoidal vein and by the structure of the male subgenital plate.

From *A. affinis* Bol., with which the new species also occurs together, it differs in the long antennae and in the shape of the hind femora.

A. thalassinus F. is actually the nearest relative of *A. oxianus* occuring in Central Asia, and the new species runs down to it if the existing keys to species are used. It differs from *A. thalassinus* as follows:

1 (2) Antennae in the ♂ scarcely longer than head and pronotum together, in the ♀ shorter; their median joints not more than twice as long as broad. Temporal foveolae shorter, feebly narrowed forwards, their lower margin perfectly straight. Tarsi with the pulvilli between the claws about half as long as a claw. Median spot of elytra, if present, touching the costal margin. Smaller..... **A. thalassinus** (F.).

2 (1) Antennae in the ♂ half again as long as, in the ♀ distinctly longer than, the head and pronotum; their median joints three times as long as broad. Temporal foveolae longer, strongly narrowed forwards, their lower margin more or less incurved. Tarsi with the pulvilli between the claws scarcely perceptible, rudimentary. Median spot of elytra never touching the costal margin. Larger..... **A. oxianus,** sp. n.

These characters are, of course, supplemented by some differences in coloration, and in the details of morphology, and no doubt can possibly arise as to the validity of the new species, the more so that I am unable to find anything like it amongst the large exotic (Indian and African) series of *Aiolopus* spp. at my disposal.

Hilethera maculata (Karny).

1907. *Aiolopus tergestinus* var. *maculatus* Karny, Verh. Zool.-bot. Ges. Wien, LVII, p. 285.

1922. *Lerina buxtoni* Uvarov, Journ. Bombay Nat. Kist. Soc., XXVIII, p. 360, *(syn. nov)*.

1925. *Hilethera buxtoni* Uvarov, *Eos*, I, p. 38, pl. II, figs. 7, 10.

Karny, in his paper on the «varieties» of *Aiolopus tergestinus* has given only the shortest descriptions of color characters, without paying much attention to structure. The whole description of *maculatus* consists in mentioning «die breiten Querbander der Elytra», but an

examination of the type, a female from Shahrud in N. Persia (kindly sent to me by Dr. Zerny and Prof. Ebner from Vienna) showed to me at once that the insect has nothing to do with *A. tamulus* F., with which Karny compares it, but does not differ from my *Lerina buxtoni*, originally described from Amara in Mesopotamia, and later on transferred to my genus *Hilethera*. It is, of course, conceivable that Karny should have referred the insect to *Aiolopus*, the females of *Hilethera* being not as strikingly different from those of *Aiolopus*, as the males are, but he overlooked completely the peculiar shape (and coloration) of hind femora, which makes it absolutely impossible to compare *maculatus* either with *A. tamulus*, or with *A. tergestinus*.

The characters given in my key to *Hilethera* (*l. c.*, 1925), to separate *H. turanica* from *H. buxtoni* (= *maculata)* may be supplemented by the relative length of elytra which in the latter extend beyond the tips of hind tibiae, while in *turanica* they reach only their apical third.

Hyalorrhipis clausi insignis, sbsp. n.

As I have stated some years ago (Horae Soc. Ent. Ross., XL, n° 3, 1912, p. 24) the Transcapian specimens of *H. clausi* Ev. differ from the typical ones (*i. e.* those from the deserts north of the Caspian Sea) by their size and markings. These differences I consider now sufficient for separating two subspecies of *H. clausi* and a diagnosis of the new subspecies is, as follows:

Larger than the typical form, and more heavily marked with dark-brown and even blackish (on the head and pronotum) spots and dots. Lateral facial keels distinct (in the typical form very feeble, practically obsolete). Lower margin of pronotal lobes feebly sinuate (in the typical form straight). Hind tibiae stramineous.

Measurements of the two subspecies:

	CLAUSI		INSIGNIS	
	♂	♀	♂	♀
Total length	16-17	19-21	19	(unknown)
Pronotum	3	3-5	3-5	
Elytra	16-17	20-21	19	
Hind femur	9	11	10	

The *type* of *H. clausi insignis* is from Farab, on the Amu-Darya (Oxus), 7, VII, 1922.

The new subspecies appears to be widely distributed in the Transcaspian sandy deserts, from the Caspian Sea to Amu-Darya (Uvarov, *l. c.*).

Hyalorrhipis turcmena, sp. n.

♀ *(type)*. Relatively large.

Antennae a little longer than head and pronotum together.

Head somewhat prominent above the level of pronotum. Face distinctly reclinate. Frontal ridge depressed, very slightly prominent and widened between antennae, gradually and not strongly narrowed at the fastigium and again just under ocellum; its surface above the ocellum is convex along the middle, but shallowly sulcate close to the lateral margins which are raised, callous; immediately under the ocellum it is rather deeply impressed, the margins here being well distinct and parallel; further down the margins are obliterate, but the surface is still very slightly impressed. All ocelli large. Fastigium of vertex strongly sloping; its margins between the eyes well raised, feebly divergent forwards until they reach temporal foveolae, and from this point, which is at the level of the anterior margin of the eyes, they converge forwards, but are very low, practically obsolete; the surface of the vertex is very deeply and densely punctured (looking almost spongy), except a patch along the middle, which is very minutely rugulose and widened forwards; at the back end of the vertex, between the eyes, there is a smooth round impression, bordered in front by a transverse sulcus. Temporal foveolae not at all impressed, but rugulose and very densely and deeply punctured (spongy); their margins not at all raised. Eyes considerably prominent sideways and a little upwards; their distance on the vertex more than half as broad as one of the eyes when seen from above.

Pronotum scarcely depressed, but somewhat compressed laterally, distinctly constricted in prozona and selliform. Anterior margin bisinuate, in the middle obtusely prominent forwards, the immediate angle rounded and notched. Submarginal sulcus well developed throughout, not interrupted in the middle. First sulcus sharp, broad-

ly bow-shaped in the middle; second sulcus shallow, indistinct, also strongly bow-shaped; third sulcus very deep, practically straight, in the middle with a minute angulate projection forwards. Metazona considerably longer than prozona and distinctly raised above its level, not much broader than long, minutely and densely punctured and rugulose, feebly convex, with the shoulders strongly prominent, though rounded; hind angle broadly rounded, with the sides feebly convex. Median keel in prozona obliterate, its place indicated only by a fine pale line, in metazona well distinct, though fine, linear. Lateral lobes distinctly shorter than deep; surface very uneven, deeply furrowed by sulci, metazona very coarsely and densely punctured, prozona in its lower part with dense, sinuate longitudinal wrinkles; front lower angle strongly attenuate, directed obliquely forwards and downwards, its surface strongly convex; hind angle still more strongly attenuate, directed downwards and slightly outwards; lower margin very distinctly concave; hind margin practically straight, except at the attenuate lower angle, which causes a broad inflexion of the margin. Episternum elongate triangular, front lower angle rounded, surface convex.

Elytra reaching well beyond the apex of the abdomen, with very sharp and regular veins and veinlets. Mediastinal field slightly expanded before the middle, with an irregular false vein nearly reaching the apex, in the apical half with broadly distant regular veinlets. Scapular field with a false vein not reaching the middle, in more than the apical half with broadly distant regular veinlets. Radial veins strongly raised; second radial with two branches; third radial with three branches. Discoidal field with regularly disposed transverse veinlets, which are very dense and incrassate in the basal portion and in front of the discoidal vein, while in the apical half of the field they are less dense and form fairly regular, transversely stretched cells, some of which are divided into two; discoidal vein thick, strongly raised, slightly sinuate, beginning at the end of the basal third of the field, running close to the radial vein and gradually approaching to it, very nearly touching it apically. Interulnar field almost as broad as the discoidal, with a very irregular (partly double) false vein; veinlets not dense, forming transversely stretched, but not regular, cells. Apical half of the elytra with well developed false veins between all the radial branches; veinlets very regular, cells quadrate.

Inner spurs of the hind tibiae stout, longer than the first tarsal joint.

General coloration very pale ochraceous, a little darker above, marmorated with whitish and bluish-grey on the sides. Head pale bluish-grey, with very minute, but sharp, dark scattered punctures on the face and cheeks; vertex and occiput with a fain ochraceous tinge. Pronotum with a broad, pale-ochraceous fascia along the disc, bordered laterally with pale-bluish-grey fasciae; lateral lobes marmorated with bluish-grey and whitish-ochraceous; hind margin of the disc with indistinct brownish spots. Elytra whitish anteriorly, pale-ochraceous in the rest, getting darker behind, with fairly numerous brown spots, which are larger and more dense along the hind margin, getting both smaller and less densely placed anteriorly, practically absent in front of the second radial vein, there being only a few grey spots at the base of the scapular area. Hind wings hyaline. Hind femora pale-ochraceous, with two indistinct bluish-grey fasciae. Hind tibiae whitish, above bluish.

Total length 26, pronotum 4.5, elytra 24.5, hind femur 12 mm.

Described from a single female from Mola-Kara, Transcaspia (Turkmenistan), 10.VI.1923.

This is the insect which I have figured and recorded from Transcaspia under the name *Leptopternis canescens* (*Horae Soc. Ent. Ross.*, XL, n° 3, 1912, p. 24, fig. 2, pl. I, fig. 3). Dr. Carl, of the Geneva Museum, was very kind to compare the specimen before me now with Saussure's type of *canescens*, which is a male from Egypt, and he was inclined to think them distinct specifically, while his very careful notes and sketches of the type enable me to endorse his opinion and to describe my species, as new.

H. turcmena differs from *H. canescens* mainly in structure of the pronotum, and in the venation of elytra. In *canescens* the anterior submarginal sulcus of the pronotum is more feeble and broadly interrupted on the disc, while in *turcmena* it is deep throughout. The median keel on the metazona is hardly perceptible in *canescens*, and perfectly developed, if linear, in the new species. Still better difference exists in the shape of the lateral lobes, their angles being much more attenuate in *turcmena* than in *canescens*. Elytra offer a character which is especially important and, apparently, separates the new

species from all other members of the genus, including *H. canescens*, in which the hind radial vein has only two branches, while in *H. turcmena* there are three branches.

There is no reason to suggest that all these differences may be sexual, the type of *H. canescens* being a male, because the characters involved do not vary by sexes in other species of the genus.

H. turcmena cannot possibly be confused with *H. clausi insignis* Uv., which is a much smaller insect. There may be, however, in Central Asian deserts still other, undescribed, species of the genus.

H. turcmena must be fairly widely distributed in Transcaspia, as my first record was from Farab on the Amu-Darya, and the type is from Mola-Kara, not far from the Caspian Sea.

Sphingonotus nebulosus (F. W.).

1846. *Oedipoda nebulosa,* Fischer Waldheim, Orth. Imp. Ross, p. 290, pl. XXXII, fig. 1.

1925. *Sphingonotus nebulosus*, Uvarov, Journ. Bombay Nat. Hist. Soc. XXX, p. 266.

I have recently received, through Mr. N. V. Antonov in Omsk, a pair of this species representing its typical form with the wings entirely pale-blue in the basal part, without any trace of purple; the specimens are from the shores of the lac Zaisan. In the Turkestan proper the species is represented by another form in which the base of wings is bi-colored, bluish near the anterior margin and pale purple in the rest. In the Northern Persia still another form makes its appearance with the same two colours of the wing-base very intense. The sculpture of the pronotum also becomes much more rough in the southern form. I regard these three forms as subspecies and they may be separated by the following key.

Key to subspecies of *Sph. nebulosus.*

1 (2) Basal disc of wings uniformaly pale-blue. Pronotum scarcely rugulose; hind angle rounded. Dauria, Zaisan, Mugodshary mountains..... ..... 1. **Sph. nebulosus nebulosus** (F. W.).

2 (1) Basal disc of wings bi-coloured.

3 (4) Basal disc of wings pale bluish anteriorly, with a faint purplish tinge in the rest. Pronotum slightly rugose.—Turkestan; Transcaspia (type, ♂ from Ashaba, Ferghana)..... 2. **Sph. nebulosus violascens** sbsp. n.

4 (3) Basal disc of wings brilliantly bi-coloured, blue anteriorly, bright purple in the rest. Pronotum rugose, especially in the prozona; hind angle acute.—N. Persia, S. Armenia..... 3. **Sph. nebulosus persa** Sauss.

Egnatioides desertus sp. n.

Similar to *E. striatus* Voss. from Sahara.

♂ *(type)*. Antennae less than twice as long as head and pronotum together, fairly stout, their median joints about twice as long as broad, the apex compressed, but not dilated.

Head moderately prominent above the pronotum. Face strongly reclinate. Frontal ridge in profile distinctly rounded-prominent between antennae, lowered at the ocellum, straight in the rest; seen from the front it is sulcate throughout, except at the ocellum above, where the sulcus is bridged across; the margins sharp, above the ocellum parallel, gradually diverging downwards from it to the clypeus, reaching the latter. There are on the face, sideways from the frontal ridge and a little below the level of the ocellum, a pair of fine, but sharp, short transverse furrows, with a convexity just above and below each one of them. Lateral facial keels practically straight, both in profile and seen from the front; in the latter view they are gradually convergent upwards. Fastigium of vertex sloping, in profile forming a distinct, though rounded, angle with the frontal ridge, distinctly longer than broad, and considerably narrower than an eye seen from above; its surface concave, forming a continuous sulcus with that of the frontal ridge; margins well raised. Occiput with a pair of scarcely perceptible short transverse ridges placed close to the eyes behind their middle. Temporal foveolae narrowly-oval, well impressed, with raised margins.

Pronotum distinctly longer than head, somewhat depressed, feebly selliform. Disc in prozona feebly convex, in metazona concave on each side of the median keel. Median keel low, but sharp, in front of the first sulcus and in metazona, obliterate between the sulci. The sulci shallow, the second one practically obliterate; sections of the

disc between the sulci not gibbose. Lateral keels slightly indicated in front of the first sulcus where they are subparallel; in metazona there are no actual keels, but the shoulders seem raised owing to the metazonal disc being impressed. Hind margin broadly rounded. Lateral lobes longer than high, with oblique callosities between the sulci; lower margin slightly sinuate, its anterior half ascending; hind angle a little more than 90°, rounded.

Prosternum with a large, low, transversely-oval inflation, the surface of which is punctured. Mesosternum with the transverse sulcus strongly bow-shaped, mesosternal lobes transverse, very broadly separated. Metasternal interspace transverse.

Elytra narrow, reaching beyond the hind knees. Principal veins practically straight and parallel; transverse veinlets very sparse, irregular, some of them obsolescent. Discoidal field open behind, with a false vein along the middle, and very few transverse veinlets.

Abdomen with the tympanum open. Tergites 3-6 laterally each with a series of 4-6 irregularly sinuate, subparallel, vertical ridges, the first and the last ridge on each segment being stronger than the others; these ridged spaces occupy about half the side of each tergite; some rugosities are also noticeable on the tergites 2nd and 7th. Subgenital plate short, obtuse. Cerci short.

General coloration whitish-ochracheous. Antennae with scarcely perceptible darkish rings, in the apical half reddish-brown. Head and pronotum with indistinct greyish and brownish dots. Elytra with the membrane whitish, not quite transparent; veins ochraceous, some with darker dots along them. Wings bluish basally; principal veins and some veinlets blackish. Hind femora with two sharp brownish-black spots above; their outer face with a series of 4-5 elongate spots along the lower carina, inside pale straw-yellow with two very faint brownish fasciae. Hind tibiae very faintly bluish, outwardly near the base with brownish dots.

♀ *(paratype)*. Frontal ridge subconstricted below the ocellum, sulcate throughout, but less deeply than in the male. Lateral facial keels slightly sinuate near the lower end, but not above. Fastigium of vertex a little longer than broad. Abdominal tergites laterally with scarcely perceptible rugosities and punctures. Valvae of the ovipositor short, with strong basal teeth and strongly curved apices

Total length ♂ 12.5, ♀ 16; pronotum ♂ 2.5, ♀ 3.5; elytra ♂ 11, ♀ 14; hind femur ♂ 8, ♀ 9 mm.

Described from 3 ♂♂ (including the *type)* and 3 ♀♀ from Perovsk (Kyzyl-Orda) and 1 ♂ from the town Turkestan, both in the Syr-Darya province.

I refer this remarkable little grasshopper to the genus *Egnatioides* Voss. founded on a species, *E. striatus* Voss., from the Algerian Sahara. Thanks to the kindness of Dr. W. Göthe, I have received from the Stuttgart Museum types of *E. striatus*, as well as a female of *Egnatius coerulans* Kr., also from Algerian Sahara. This latter species also proved to be not a true *Egnatius*, but an *Egnatioides*, where it must be transferred.

Our new species is, thus, the third in the genus and its discovery in Central Asia shows once more a considerable uniformity of fauna throughout the vast Palaearctic deserts.

Since Vosseler has not indicated definite characteres separating *Egnatioides* from *Egnatius*, I think the following key may be of some assistance to future students of this little known group.

Key to genera *Egnatius* and *Egnatioides*.

1 (2) General form more compressed laterally, shorter. Antennae very fine and long, in the male distinctly clavate. Head strongly projenting upwards; face in ♂ somewhat reclinate, in ♀ vertical; frontal ridge seen in profile scarcely prominent between antennae; lateral facial keels subparallel, strongly sinuate above. Fastigium of vertex strongly sloping, transverse, not narrower than one of the eyes seen from above. Pronotum short; transverse sulci deep; sections of the disc between sulci strongly gibbose; lateral lobes higher than long. Hind femora shorter and thicker..... **Egnatius** St.

2 (1) General form depressed, elongate. Antennae fairly stout, not at all, or scarcely incrassate. Head scarcely projecting upwards; face in both sexes strongly reclinate; frontal ridge seen in profile distinctly prominent between antennae, lowered at the ocellum; lateral facial keels gradually convergent upwards, straight, or only slightly sinuate below, but not above. Fastigium of vertex moderately sloping, projecting forward, distinctly narrower than one of the eyes seen from above. Pronotum long; transverse sulci feeble, the second one particularly so; sections of the disc between the sulci practically flat; lateral lobes longer than high. Hind femora longer and more slender..... **Egnatioides** Voss.

Another genus of this interesting group is *Charora* Sauss. [1], which differs especially by the venation of hind wings. I. Bolívar (Ann. Soc. Ent. Belg., XLIII, p. 592, 1899) suggested that the remarkable ridged spaces on sides of tergites of males in *Charora* are also a generic feature, but I find that the tergites in *Egnatius* are also provided with vertically ridged spaces, though the ridges are neither well developed, nor regular; in the new *Egnatioides* the same structures may be seen in a much more developed stage, though still not reaching the regularity observed in *Charora*. In the male of *Egnatioides striatus* Voss. the tergites are not at all ridged, or even rugulose, only feebly punctured; *E. coerulans* Kr. is not known to me in the male sex, and the author does not describe the abdomen at all. Anyway, it seems obvious that in the *Charora* we observe only further development and specialization of the structures present in the other two genera, as well.

The last genus of the group *Egnatii* is *Egnatiella* I. Bol., comprising four Moroccan species. In the structure of the head and pronotum it resembles *Egnatius* more than *Egnatioides*.

Of the two previously known species of *Egnatioides*, the nearest to the new one is *E. striatus*, but *E. desertus* differs from it by the absence of the median occipital keel, by the less constricted pronotum, which is also less strongly punctured, and by the ridged spaces on the male tergites. *E. coerulans* differs from both other species by the less reclinate face, broader fastigium, much more pronounced pronotal sculpture and relatively thick hind femora, which suggest its nearness to *Egnatius*, or to *Egnatiella*.

Paranocarodes opacus (Br. W.).

1882. *Nocarodes opacus*, Brunner Wattenwyl, Prodr. Europ. Orth, p. 189.

I have examined the types, ♂ and ♀, of this species and found that it must be referred to the genus *Paranocarodes*, recently separa-

[1] Speaking of this genus, I would like to draw attention to a bad geographical mistake by Saussure who recorded *Charora crassivenosa* from «Caucasus: Mons Elbrus», while in fact it should be the Elburs mountains in Persia, as according to the information, kindly supplied by Prof. R. Ebner, the type is from «Poin-Scha-kuh. Elbrus», which must be interpreted as a locality in the Shah-kuh range of the Elburs mountains.

ted by I. Bolívar (Gen. Insectorum, fasc. 170, Pamphaginae, 1916, p. 22) from *Nocarodes*.

I have also compared the types with a pair of cotypes of *N. opacus* var. *nigripes* Stshelkanovzev (Bull. Mus. Caucase, X, 1916, p. 2, sep. repr.) from Zuvant, south of the Caspian Sea [1], and found them well distintict, especially in the profile of pronotum and abdomen, the tergites of the latter not being acutely produced in *nigripes*, which shows the latter to be an independent species.

I am almost certain that a mistake has been made by Brunner in recording this species (and *Tmethis cyanipennis* Sauss.) from Khiva, while I think they must be both from Northern Persia.

Oxya fuscovittata (Marsch.).

1835. *Gryllus fuscovittatus*, Marschall, Ann. Wien. Museum, I, p. 211.
1911. *Oxya velox*, Ikonnikov (*nec* F. !), Revue Russe d'Entom., XI, p. 109.
1912. *Oxya turanica*, Uvarov, Horae Soc. Ent. Ross., XL, N° 3, p. 28.
1925. *Oxya fuscovittata*, Willemse, Tijdschr. Entom., LXVIII, p. 22.

Marschall's species was described from an unknown locality, but Willemse (*l. c.*) compared the type with some specimens of my *O. turanica* from Turkestan and found them identical. I was at first inclined to doubt this synonymy, because it seemed impossible that Marschall's type could have actually been from Central Asia, a practically inaccessible country in those days. Lately, however, I have found in the British Museum collection a female specimen from Baltistan, in Northern India, which does not differ from the Turkestan specimens. This makes probable that Marschall also received his specimen from India, and at the same time permits us to state definitely that *O. fuscovittata* must be considered as a purely tropical element in the fauna of Central Asia. I believe that such elements (*Gelastorhinus* being another example) are not immigrants from tropics, but genuine relics of an epoch with a tropical climate.

[1] Sent to me by Mr. D. P. Dovnar-Sapolsky, to whom my thanks are due.